

CLAIMS

1. Roller for conveying a web or sheet of paper in machines for converting paper and similar products, such as in particular interfolding, rewinding or winding machines, comprising a first cylindrical tubular body equipped with a plurality of radial holes arranged according to substantially longitudinal rows **characterised in that:**
 - said tubular body is capable of rotating with respect to a second inner fixed co-axial body,
 - at least one suction chamber is provided connected to a suction system defined between said first and said second body by means of sliding sealing elements, said chamber being suitable for being brought selectively in communication with at least one row of said holes during the relative rotation of said bodies.
2. Conveying roller, according to claim 1, where the sealing capability of the suction chamber is achieved forcing elastically said sliding sealing elements against the inner surface of said first cylindrical tubular body.
3. Conveying roller, according to claim 1, wherein said second body is tubular cylindrical and is associated to two radial boards to it external that radially extend between said first and said second body for all the length of said roller in order to define said suction chamber, between said radial boards at least one opening being provided that brings in communication said chamber with an inner space within said second tubular body that in turn is connected to said suction system.
4. Conveying roller, according to claim 3, wherein a plurality is provided of apertures arranged

longitudinally along said second cylindrical tubular body and within the portion thereof defined by said radial boards in said chamber.

- 5 5. Conveying roller, according to claim 3, wherein the ends of said radial boards provide sealing plastic inserts to contact the inner surface of said first body.
- 10 6. Conveying roller, according to claim 3, wherein the sealing capability of the suction chamber is achieved forcing elastically said radial boards against the inner surface of said first cylindrical tubular body.
- 15 7. Conveying roller, according to claim 3, wherein each radial board comprises a fixed portion, forming a guide arranged longitudinally with respect to the conveying roller, within which a bar can slide radially forced elastically against the inner surface of the first cylindrical tubular body forming said of sliding sealing element.
- 20 8. Paper converting machines, such as a rewinding, a winding or an interfolding machine, **characterised in that** it comprises at least one paper conveying roller according to the previous claims.
- 25 9. Method for moving a sheet or a web of paper along paper converting machines, such as rewinding, winding, interfolding machines, by means of a paper conveying roller comprising a first cylindrical tubular body equipped with a plurality of radial holes arranged according to substantially longitudinal rows, **characterised in that** said holes are selectively
30 enabled for suction and for not suction by the relative rotation between said first cylindrical tubular body and a second inner fixed co-axial body connected to a suction system through at least one opening, said relative rotation bringing selectively

in communication a suction chamber defined between
said first and said second body with at least one row
of said holes, said chamber being defined by sliding
sealing elements arranged between said first and said
5 second body.

10. Method according to claim 9 where the sealing
capability of the suction chamber is achieved forcing
elastically said sliding sealing elements, which
belong to said second fixed co-axial body, against the
10 inner surface of said first cylindrical tubular body.